

File: c:\spice\sch\eval\rwn_sch\610_DEQ1.doc RWN 09/15/03

An example of using PSpice to solve differential equations.

GVALUE is in the ABM.slb library PARAM is in the SPECIAL.slb library

PARAMETERS:
a 1

Rconv is a very large resistor inserted to insure a dc path to ground for convergence. There also needs to be a ground, which is used as the reference for all node voltages.

Circuit to realize the differential equation:
 $dx/dt = -a \cdot \tanh(x); x(0) = IC$

Use Setup, checking Parametric and Transient.
In Parameter use Global and a, set as $1 \leq a \leq 3$ in steps of 1.
In Transient use Final Time = 3s and Print Step = 20ms (note Print Step is the time between points in the plot, not calculation points which are set by Step Ceiling).

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